#### What is Claimed:

### 1. A compound of the formula:

wherein:

A is O. S. or NR4;

B is CR5R6:

 $R^4$ ,  $R^5$ , and  $R^6$  are independently selected from the group consisting of H,  $C_1$  to  $C_6$  alkyl, substituted  $C_1$  to  $C_6$  alkyl,  $C_2$  to  $C_6$  alkenyl, substituted  $C_2$  to  $C_6$  alkynyl,  $C_2$  to  $C_6$  alkynyl, substituted  $C_2$  to  $C_6$  alkynyl,  $C_3$  to  $C_6$  cycloalkyl, substituted  $C_3$  to  $C_8$  cycloalkyl, anyl, substituted anyl, heterocyclic, and substituted heterocyclic;

or R4 and R5 are fused to form a 5 to 7 membered ring;

 $R^1$  is selected from the group consisting of H, OH, NH<sub>2</sub>,  $C_1$  to  $C_6$  alkyl, substituted  $C_1$  to  $C_6$  alkyl,  $C_3$  to  $C_6$  alkenyl, substituted  $C_3$  to  $C_6$  alkenyl, alkynyl, substituted alkynyl, and  $COR^A$ ;

 $R^A$  is selected from the group consisting of H,  $C_1$  to  $C_3$  alkyl, substituted  $C_1$  to  $C_3$  alkyl, aryl, substituted aryl,  $C_1$  to  $C_3$  alkoxy, substituted  $C_1$  to  $C_3$  alkoxy,  $C_1$  to  $C_3$  aminoalkyl, and substituted  $C_1$  to  $C_3$  aminoalkyl,

 $R^2$  is selected from the group consisting of H, halogen, CN, NO<sub>2</sub>, C<sub>1</sub> to C<sub>6</sub> alkyl, substituted C<sub>1</sub> to C<sub>6</sub> alkyl, C<sub>1</sub> to C<sub>6</sub> alkoxy, substituted C<sub>1</sub> to C<sub>6</sub> alkoxy, C<sub>1</sub> to C<sub>6</sub> aminoalkyl, and substituted C<sub>1</sub> to C<sub>6</sub> aminoalkyl.

R3 is selected from the group consisting of a) and b):

 a) a substituted benzene ring having the substituents X, Y and Z as shown below:

X is selected from the group consisting of halogen, CN,  $C_1$  to  $C_3$  alkyl, substituted  $C_1$  to  $C_3$  alkyl,  $C_1$  to  $C_3$  alkoxy, substituted  $C_1$  to  $C_3$  alkoxy,  $C_1$  to  $C_3$  thioalkoxy, substituted  $C_1$  to  $C_3$  thioalkoxy,  $C_1$  to  $C_3$  aminoalkyl, substituted  $C_1$  to  $C_3$  aminoalkyl,  $NO_2$ ,  $C_1$  to  $C_3$  perfluoroalkyl, S or S membered heterocyclic ring having in its backbone S to S heteroatoms, S of S of S and S of S of

 $R^B \text{ is H, } C_1 \text{ to } C_3 \text{ alkyl, substituted } C_1 \text{ to } C_3 \text{ alkyl, aryl, substituted aryl,} \\ C_1 \text{ to } C_3 \text{ alkoxy, substituted } C_1 \text{ to } C_3 \text{ alkoxy, } C_1 \text{ to } C_3 \text{ aminoalkyl, or substituted } C_1 \text{ to } C_3 \text{ aminoalkyl;} \\$ 

R<sup>C</sup> is H, C<sub>1</sub> to C<sub>3</sub> alkyl, or substituted C<sub>1</sub> to C<sub>3</sub> alkyl;

Y and Z are independent substituents selected from the group consisting of H, halogen, CN, NO2,  $C_1$  to  $C_3$  alkoxy,  $C_1$  to  $C_3$  alkyl, and  $C_1$  to  $C_3$  thioalkoxy; and

b) a five or six membered ring having in its backbone 1, 2, or 3 heteroatoms selected from the group consisting of O, S, SO, SO<sub>2</sub> and NR<sup>7</sup> and having one or two independent substituents selected from the group consisting of H, halogen, CN, NO<sub>2</sub>, C<sub>1</sub> to C<sub>3</sub> alkyl, C<sub>1</sub> to C<sub>3</sub> alkoy, C<sub>1</sub> to C<sub>3</sub> aminoalkyl, COR<sup>D</sup>, and NR<sup>E</sup>COR<sup>D</sup>.

 $R^{D}$  is H,  $C_1$  to  $C_3$  alkyl, substituted  $C_1$  to  $C_3$  alkyl, aryl, substituted aryl,  $C_1$  to  $C_3$  alkoxy, substituted  $C_1$  to  $C_3$  alkoxy,  $C_1$  to  $C_3$  aminoalkyl; or substituted  $C_1$  to  $C_3$  aminoalkyl;

R<sup>E</sup> is H, C<sub>1</sub> to C<sub>3</sub> alkyl, or substituted C<sub>1</sub> to C<sub>3</sub> alkyl;

R7 is H or C1 to C3 alkyl;

Q is O, S, NR8, or CR9R10:

 $R^8$  is selected from the group consisting of CN,  $C_1$  to  $C_6$  alkyl, substituted

C<sub>1</sub> to C<sub>6</sub> alkyl, C<sub>3</sub> to C<sub>8</sub> cycloalkyl, substituted C<sub>3</sub> to C<sub>8</sub> cycloalkyl, aryl, substituted aryl, heterocyclic, substituted heterocyclic, and SO<sub>2</sub>CF<sub>3</sub>;

 $R^9$  and  $R^{10}$  are independent substituents selected from the group consisting of H,  $C_1$  to  $C_6$  alkyl, substituted  $C_1$  to  $C_6$  alkyl,  $C_3$  to  $C_8$  cycloalkyl, substituted  $C_3$  to  $C_8$  cycloalkyl, aryl, substituted aryl, heterocyclic, substituted heterocyclic,  $NO_2$ , CN, and  $CO-R^{11}$ :

R11 is C1 to C3 alkyl;

or CR9R10 comprises a six membered ring of the structure:

or a pharmaceutically acceptable salt thereof.

The compound according to Claim 1, wherein:

 $R^1$  is H, OH, NH<sub>2</sub>,  $C_1$  to  $C_6$  alkyl, substituted  $C_1$  to  $C_6$  alkyl, or  $COR^A$ ;

RA is H, C1 to C3 alkyl, or C1 to C3 alkoxy;

R2 is H, halogen, NO2, C1 to C3 alkyl, or substituted C1 to C3 alkyl;

R3 is the substituted benzene ring having the

substituents X and Y as shown below:

wherein:

X is selected from the group consisting of halogen, CN, C1 to C3 alkoxy,

 $C_1$  to  $C_3$  alkyl,  $NO_2$ ,  $C_1$  to  $C_3$  perfluoroalkyl, 5 membered heterocyclic ring having in its backbone 1 to 3 heteroatoms, and  $C_1$  to  $C_3$  thioalkoxy;

Y is on the 4' or 5' position and is selected from the group consisting of H, halogen, CN, NO<sub>2</sub>,  $C_1$  to  $C_3$  alkoxy,  $C_1$  to  $C_3$  alkyl, and  $C_1$  to  $C_3$  thioalkoxy.

The compound according to Claim 1, wherein:
 R<sup>3</sup> is the five membered ring of the structure:

wherein:

U is O, S, or NR7;

R7 is H or C1 to C3 alkyl;

X' is selected from the group consisting of halogen, CN, NO<sub>2</sub>, C<sub>1</sub> to C<sub>3</sub> alkyl, and C<sub>1</sub> to C<sub>3</sub> alkoxy;

Y' is H or C1 to C3 alkyl.

4. The compound according to Claim 1, wherein:

R3 is the six membered ring of the structure:

wherein:

X1 is N or CX2;

X2 is halogen, CN or NO2.

- The compound according to Claim 24, which is 6-(3-Nitro-phenyl)-3H-benzooxazol-2-one or a pharmaceutically acceptable salt thereof.
- The compound according to Claim 24, which is 6-(3-Nitro-phenyl) 3H-benzothiazol-2-one or a pharmaceutically acceptable salt thereof.
- The compound according to Claim 24, which is 6-(3-Chloro-phenyl)-3H-benzothiazol-2-one or a pharmaceutically acceptable salt thereof.
- The compound according to Claim 1, which is 7-(3-Nitro-phenyl)-4Hbenzo[1,4]thiazin-3-one or a pharmaceutically acceptable salt thereof.
- The compound according to Claim 1, which is 2-Ethyl-7-(3-nitrophenyl)-4H-benzo[1,4]thiazin-3-one or a pharmaceutically acceptable salt thereof.
- The compound according to Claim 1, which is 8-(3-Chloro-phenyl-1,2,3,3a-tetrahydro-5H-pyrrolo[1,2-a]quinoxalin-4-one or a pharmaceutically acceptable salt thereof.
- The compound according to Claim 1, which is 6-(3-Chloro-phenyl)-4methyl-3,4-dihydro-1H-quinoxalin-2-one or a pharmaceutically acceptable salt thereof.
- The compound according to Claim I, which is 5-(3, 4-Dihydro-4methyl-2-oxo-quinoxalin-6-yl) thiophene-3-carbonitrile or a pharmaceutically acceptable salt thereof.
- The compound according to Claim 1, which is 4-(n-Butyl)-6-(3-chlorophenyl)-3,4-dihydro-1H quinoxalin-2-one or a pharmaceutically acceptable salt thereof.

- The compound according to Claim 1, which is 6-(3-Cyano-5fluorophenyl)-4-isopropyl-3,4-dihydro-1H-quinoxalin-2-one or a pharmaceutically acceptable salt thereof.
- The compound according to Claim 1, which is 6-(3-Chloro-4-fluorophenyl)-4-isopropyl-3,4-dihydro-1H-quinoxalin-2-one or a pharmaceutically acceptable salt thereof.
- The compound according to Claim 1, which is 6-(3-Chloro-phenyl)-4isopropyl-3,4-dihydro-1H-quinoxalin-2-one or a pharmaceutically acceptable salt thereof
- A pharmaceutical composition comprising a compound of Claim 1, or a
  pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier or
  excipient.
- The pharmaceutical composition according to Claim 17 wherein Q is

  O.
- 19. The pharmaceutical composition according to Claim 17 wherein Q is  $S.\ NR^7.$  or  $CR^8R^9.$
- 20. A method of inducing contraception in a mammal, the method comprising administering to a mammal in need thereof a compound of Claim 1, or a pharmaceutically acceptable salt thereof.
- 21. A method of treatment or prevention of benign or malignant neoplastic disease in a mammal, the method comprising administering to a mammal in need thereof a compound of Claim 1, or a pharmaceutically acceptable salt thereof.

- 22. The method according to Claim 21 wherein the benign or malignant neoplastic disease is selected from the group consisting of uterine myometrial fibroids, endometriosis, benign prostatic hypertrophy; carcinomas and adenocarcinomas of the endometrium, ovary, breast, colon, prostate, pituitary, meningioma and other hormone-dependent tumors.
- 23. A method of treatment in a mammal of carcinomas or adenocarcinomas of the endometrium, ovary, breast, colon, or prostate, the method comprising administering to a mammal in need thereof a compound of Claim 1, or a pharmaceutically acceptable salt thereof.

## 24. A compound of the formula:

wherein:

A is O or S:

B is a bond between A and C=O:

 $R^1$  is selected from the group consisting of H, OH, NH<sub>2</sub>,  $C_1$  to  $C_6$  alkyl, substituted  $C_1$  to  $C_6$  alkyl,  $C_3$  to  $C_6$  alkenyl, substituted  $C_3$  to  $C_6$  alkenyl, alkynyl, substituted alkynyl, and  $COR^{A_1}$ .

 $R^{A}$  is selected from the group consisting of H,  $C_1$  to  $C_3$  alkyl, substituted  $C_1$  to  $C_3$  alkyl, aryl, substituted aryl,  $C_1$  to  $C_3$  alkoxy, substituted  $C_1$  to  $C_3$  alkoxy,  $C_1$  to  $C_3$  aminoalkyl, and substituted  $C_1$  to  $C_3$  aminoalkyl,

 $R^2$  is selected from the group consisting of H, halogen, CN, NO2,  $C_{\rm l}$  to  $C_{\rm 6}$ 

alkyl, substituted  $C_1$  to  $C_6$  alkyl,  $C_1$  to  $C_6$  alkoxy, substituted  $C_1$  to  $C_6$  alkoxy,  $C_1$  to  $C_6$  aminoalkyl, and substituted  $C_1$  to  $C_6$  aminoalkyl;

R<sup>3</sup> is selected from the group consisting of a), b), c), and d):

a) a substituted benzene ring having the substituents X, Y and Z as shown below.

X is selected from the group consisting of halogen, CN,  $C_1$  to  $C_3$  alkyl, substituted  $C_1$  to  $C_3$  alkyl,  $C_1$  to  $C_3$  alkoxy, substituted  $C_1$  to  $C_3$  alkoxy,  $C_1$  to  $C_3$  thioalkoxy, substituted  $C_1$  to  $C_3$  thioalkoxy,  $C_1$  to  $C_3$  aminoalkyl, substituted  $C_1$  to  $C_3$  aminoalkyl, NO<sub>2</sub>,  $C_1$  to  $C_3$  perfluoroalkyl, 5 or 6 membered heterocyclic ring having in its backbone 1 to 3 heteroatoms,  $COR^B$ ,  $OCOR^B$ , and  $NR^CCOR^B$ ;

 $R^B \text{ is H, } C_1 \text{ to } C_3 \text{ alkyl, substituted } C_1 \text{ to } C_3 \text{ alkyl, aryl, substituted aryl,} \\ C_1 \text{ to } C_3 \text{ alkoxy, substituted } C_1 \text{ to } C_3 \text{ alkoxy, } C_1 \text{ to } C_3 \text{ aminoalkyl, or substituted } C_1 \text{ to } C_3 \text{ aminoalkyl.} \\$ 

RC is H, C1 to C3 alkyl, or substituted C1 to C3 alkyl;

Y and Z are independent substituents selected from the group consisting of H, halogen, CN, NO<sub>2</sub>, C<sub>1</sub> to C<sub>3</sub> alkoxy, C<sub>1</sub> to C<sub>3</sub> alkyl, and C<sub>1</sub> to C<sub>3</sub> thioalkoxy:

- b) a five membered ring having in its backbone 1, 2, or 3 heteroatoms selected from the group consisting of O, S, SO, SO<sub>2</sub> and  $NR^7$  and having one or two independent substituents selected from the group consisting of H, halogen, CN, NO<sub>2</sub>,  $C_1$  to  $C_3$  alkyl,  $C_1$  to  $C_3$  alkoxy,  $C_1$  to  $C_3$  aminoalkyl,  $COR^D$ , and  $NR^ECOR^D$ ;
  - a six membered ring having in its backbone 2 or 3 NR<sup>7</sup> heteroatoms and

having one or two independent substituents selected from the group consisting of H, halogen, CN,  $NO_2$ ,  $C_1$  to  $C_3$  alkyl,  $C_1$  to  $C_3$  alkoxy,  $C_1$  to  $C_3$  aminoalkyl,  $COR^D$ , and  $NR^ECOR^D$ : and

d) a six membered ring having in its backbone 1, 2, or 3 heteroatoms selected from the group consisting of O, S, SO, and SO<sub>2</sub> and having one or two independent substituents selected from the group consisting of H, halogen, CN, NO<sub>2</sub>, C<sub>1</sub> to C<sub>3</sub> alkyl, C<sub>1</sub> to C<sub>3</sub> alkoxy, C<sub>1</sub> to C<sub>3</sub> aminoalkyl, COR<sup>D</sup>, and NR<sup>B</sup>COR<sup>D</sup>;

 $R^D$  is H,  $C_1$  to  $C_3$  alkyl, substituted  $C_1$  to  $C_3$  alkyl, aryl, substituted aryl,  $C_1$  to  $C_3$  alkoxy, substituted  $C_1$  to  $C_3$  alkoxy,  $C_1$  to  $C_3$  aminoalkyl, or substituted  $C_1$  to  $C_3$  aminoalkyl;

R<sup>E</sup> is H, C<sub>1</sub> to C<sub>3</sub> alkyl, or substituted C<sub>1</sub> to C<sub>3</sub> alkyl;

R7 is H or C1 to C3 alkyl;

Q is O;

or a pharmaceutically acceptable salt thereof.

#### 25. A compound of the formula:

wherein:

A is S:

B is a bond between A and C=Q;

 $R^1$  is selected from the group consisting of H, OH, NH<sub>3</sub>,  $C_1$  to  $C_6$  alkyl, substituted  $C_1$  to  $C_6$  alkyl,  $C_3$  to  $C_6$  alkenyl, substituted  $C_3$  to  $C_6$  alkenyl, alkynyl, substituted alkynyl, and COR $^{\Lambda}$ :

RA is selected from the group consisting of H, C1 to C3 alkyl, substituted C1 to

 $C_3$  alkyl, aryl, substituted aryl,  $C_1$  to  $C_3$  alkoxy, substituted  $C_1$  to  $C_3$  alkoxy,  $C_1$  to  $C_3$  aminoalkyl, and substituted  $C_1$  to  $C_3$  aminoalkyl;

 $R^2$  is selected from the group consisting of H, halogen, CN, NO<sub>2</sub>, C<sub>1</sub> to C<sub>6</sub> alkyl, substituted C<sub>1</sub> to C<sub>6</sub> alkyl, C<sub>1</sub> to C<sub>6</sub> alkoxy, substituted C<sub>1</sub> to C<sub>6</sub> alkoxy, C<sub>1</sub> to C<sub>6</sub> aminoalkyl, and substituted C<sub>1</sub> to C<sub>6</sub> aminoalkyl;

R3 is selected from the group consisting of a), b), c), and d):

 a) a substituted benzene ring having the substituents X, Y and Z as shown below:

X is selected from the group consisting of halogen, CN,  $C_1$  to  $C_3$  alkyl, substituted  $C_1$  to  $C_3$  alkyl,  $C_1$  to  $C_3$  alkoxy, substituted  $C_1$  to  $C_3$  alkoxy,  $C_1$  to  $C_3$  thioalkoxy, substituted  $C_1$  to  $C_3$  thioalkoxy,  $C_1$  to  $C_3$  aminoalkyl, substituted  $C_1$  to  $C_3$  aminoalkyl,  $NO_2$ ,  $C_1$  to  $C_3$  perfluoroalkyl, S or S or S membered heterocyclic ring having in its backbone S to S heteroatoms. S or S or S and S or S or S and S or S or S in S or S

 $R^{8}$  is H,  $C_{1}$  to  $C_{3}$  alkyl, substituted  $C_{1}$  to  $C_{3}$  alkyl, aryl, substituted aryl,  $C_{1}$  to  $C_{3}$  alkoxy, substituted  $C_{1}$  to  $C_{3}$  alkoxy,  $C_{1}$  to  $C_{3}$  aminoalkyl, or substituted  $C_{1}$  to  $C_{4}$  aminoalkyl:

RC is H, C1 to C3 alkyl, or substituted C1 to C3 alkyl;

Y and Z are independent substituents selected from the group consisting of H, halogen, CN, NO<sub>2</sub>, C<sub>1</sub> to C<sub>3</sub> alkoxy, and C<sub>1</sub> to C<sub>3</sub> thioalkoxy;

b) a five membered ring having in its backbone 1, 2, or 3 heteroatoms selected from the group consisting of S, SO, SO<sub>2</sub> and NR<sup>7</sup> and having one or two independent substituents selected from the group consisting of H, halogen, CN, NO<sub>2</sub>, C<sub>1</sub> to C<sub>3</sub> alkvl, C<sub>1</sub> to C<sub>3</sub> alkoxy, C<sub>1</sub> to C<sub>3</sub> aminoalkyl, COR<sup>D</sup>, and NR<sup>E</sup>COR<sup>D</sup>.

- c) a five membered ring having in its backbone 2 or 3 O heteroatoms and having one or two independent substituents selected from the group consisting of halogen, CN, NO<sub>2</sub>, C<sub>1</sub> to C<sub>3</sub> alkyl, C<sub>1</sub> to C<sub>3</sub> alkoxy, C<sub>1</sub> to C<sub>3</sub> aminoalkyl, COR<sup>D</sup>, and NR<sup>F</sup>COR<sup>D</sup>; and
- d) a six membered ring having in its backbone 1, 2, or 3 heteroatoms selected from the group consisting of O, S, SO, SO<sub>2</sub> and NR<sup>7</sup> and having one or two independent substituents selected from the group consisting of H, halogen, CN, NO<sub>2</sub>, C<sub>1</sub> to C<sub>3</sub> alkyl, C<sub>1</sub> to C<sub>3</sub> alkoxy, C<sub>1</sub> to C<sub>3</sub> aminoalkyl, COR<sup>D</sup>, and NR<sup>E</sup>COR<sup>D</sup>;

 $R^D$  is H,  $C_1$  to  $C_3$  alkyl, substituted  $C_1$  to  $C_3$  alkyl, aryl, substituted aryl,  $C_1$  to  $C_3$  alkoxy, substituted  $C_1$  to  $C_3$  aminoalkyl, or substituted  $C_1$  to  $C_3$  aminoalkyl;

R<sup>E</sup> is H, C<sub>1</sub> to C<sub>3</sub> alkyl, or substituted C<sub>1</sub> to C<sub>3</sub> alkyl;

R7 is H or C1 to C3 alkyl;

Q is CR9R10;

 $R^9$  and  $R^{10}$  are independent substituents selected from the group consisting of H,  $C_1$  to  $C_6$  alkyl, substituted  $C_1$  to  $C_6$  alkyl,  $C_2$  to  $C_8$  cycloalkyl, substituted  $C_2$  to  $C_8$  cycloalkyl, aryl, substituted aryl, heterocyclic, substituted heterocyclic,  $NO_2$ , CN, and  $CO_7R^{11}$ :

R11 is C1 to C3 alkyl;

or CR9R10 comprises a six membered ring of the structure:

or a pharmaceutically acceptable salt thereof.

# 26. A compound of the formula:

wherein:

A is O;

B is a bond between A and C=Q;

 $R^1$  is selected from the group consisting of H, OH, NH<sub>2</sub>,  $C_1$  to  $C_6$  alkyl, substituted  $C_1$  to  $C_6$  alkyl,  $C_9$  to  $C_6$  alkenyl, substituted  $C_9$  to  $C_9$  alkenyl, substituted  $C_9$  to  $C_9$  alkenyl, substituted alkynyl, and COR $^{\Lambda}$ :

 $R^{\Lambda}$  is selected from the group consisting of H,  $C_1$  to  $C_3$  alkyl, substituted  $C_1$  to  $C_3$  alkyl, aryl, substituted aryl,  $C_1$  to  $C_3$  alkoxy, substituted  $C_1$  to  $C_3$  alkoxy,  $C_1$  to  $C_3$  aminoalkyl, and substituted  $C_1$  to  $C_3$  aminoalkyl,

 $R^2$  is selected from the group consisting of H, halogen, CN, NO<sub>2</sub>,  $C_1$  to  $C_6$  alkyl, substituted  $C_1$  to  $C_6$  alkyl,  $C_6$  alkoxy, substituted  $C_1$  to  $C_6$  alkoxy,  $C_1$  to  $C_6$  aminoalkyl, and substituted  $C_1$  to  $C_6$  aminoalkyl;

R3 is selected from the group consisting of a) and b):

a) a substituted benzene ring having the substituents  $X,\,Y$  and Z as shown below:

X is selected from the group consisting of halogen, CN,  $C_1$  to  $C_3$  alkyl, substituted  $C_1$  to  $C_3$  alkyl,  $C_1$  to  $C_3$  alkoxy, substituted  $C_1$  to  $C_3$  alkoxy,  $C_1$  to  $C_3$  thioalkoxy, substituted  $C_1$  to  $C_3$  thioalkoxy,  $C_1$  to  $C_3$  aminoalkyl, substituted  $C_1$  to  $C_3$ 

aminoalkyl, NO<sub>2</sub>, C<sub>1</sub> to C<sub>3</sub> perfluoroalkyl, 5 or 6 membered heterocyclic ring having in its backbone 1 to 3 heteroatoms, COR<sup>B</sup>, OCOR<sup>B</sup>, and NR<sup>C</sup>COR<sup>B</sup>;

 $R^B \text{ is H, } C_1 \text{ to } C_3 \text{ alkyl, substituted } C_1 \text{ to } C_3 \text{ alkyl, aryl, substituted aryl,} \\ C_1 \text{ to } C_3 \text{ alkoxy, substituted } C_1 \text{ to } C_3 \text{ alkoxy, } C_1 \text{ to } C_3 \text{ aminoalkyl, or substituted } C_1 \text{ to } C_3 \text{ aminoalkyl;} \\$ 

 $R^{c} \text{ is H, } C_{1} \text{ to } C_{3} \text{ alkyl, or substituted } C_{1} \text{ to } C_{3} \text{ alkyl;}$  Y and Z are independent substituents selected from the group consisting of H, halogen, CN, NO<sub>2</sub>, C<sub>1</sub> to C<sub>3</sub> alkyl, C<sub>1</sub> to C<sub>3</sub> alkoxy, and C<sub>1</sub> to C<sub>3</sub> thioalkoxy; and

b) a five or six membered ring having in its backbone 1, 2, or 3 heteroatoms selected from the group consisting of O, S, SO, SO<sub>2</sub> and NR<sup>7</sup> and having one or two independent substituents selected from the group consisting of H, halogen, CN, NO<sub>2</sub>,  $C_1$  to  $C_3$  alkyl,  $C_1$  to  $C_3$ 

 $R^D \text{ is H, } C_1 \text{ to } C_3 \text{ alkyl, substituted } C_1 \text{ to } C_3 \text{ alkyl, aryl, substituted aryl,} \\ C_1 \text{ to } C_3 \text{ alkoxy, substituted } C_1 \text{ to } C_3 \text{ alkoxy, } C_1 \text{ to } C_3 \text{ aminoalkyl;} \text{ or substituted } C_1 \text{ to } C_3 \text{ aminoalkyl;} \\$ 

 $R^E$  is H,  $C_1$  to  $C_3$  alkyl, or substituted  $C_1$  to  $C_3$  alkyl;  $R^7$  is H or  $C_1$  to  $C_3$  alkyl;

Q is CR9R10:

 $R^{9}$  and  $R^{10}$  are independent substituents selected from the group consisting of H,  $C_1$  to  $C_6$  alkyl, substituted  $C_1$  to  $C_6$  alkyl,  $C_2$  to  $C_8$  cycloalkyl, substituted  $C_3$  to  $C_8$  cycloalkyl, aryl, substituted aryl, heterocyclic, substituted heterocyclic,  $NO_2$ , CN, and  $CO_2R^{11}$ ;

 $\mathbb{R}^{11}$  is  $\mathbb{C}_1$  to  $\mathbb{C}_3$  alkyl;

or CR9R10 comprises a six membered ring of the structure:

or a pharmaceutically acceptable salt thereof.

## 27. A compound of the formula:

wherein:

A is O or S;

B is a bond between A and C=Q;

 $R^1$  is selected from the group consisting of H, OH, NH<sub>2</sub>,  $C_1$  to  $C_6$  alkyl, substituted  $C_1$  to  $C_6$  alkyl,  $C_3$  to  $C_6$  alkenyl, substituted  $C_3$  to  $C_6$  alkenyl, alkynyl, substituted alkynyl, and  $COR^A$ ;

 $R^A$  is selected from the group consisting of H,  $C_1$  to  $C_3$  alkyl, substituted  $C_1$  to  $C_3$  alkyl, aryl, substituted aryl,  $C_1$  to  $C_3$  alkoxy, substituted  $C_1$  to  $C_3$  alkoxy,  $C_1$  to  $C_3$  aminoalkyl, and substituted  $C_1$  to  $C_3$  aminoalkyl,

 $R^2$  is selected from the group consisting of H, halogen, CN, NO<sub>2</sub>, C<sub>1</sub> to C<sub>6</sub> alkyl, substituted C<sub>1</sub> to C<sub>6</sub> alkyl, C<sub>1</sub> to C<sub>6</sub> alkoxy, substituted C<sub>1</sub> to C<sub>6</sub> alkoxy, C<sub>1</sub> to C<sub>6</sub> aminoalkyl, and substituted C<sub>1</sub> to C<sub>5</sub> aminoalkyl;

R3 is selected from the group consisting of a), b), c), and d):

 a) a substituted benzene ring having the substituents X, Y and Z as shown below:

X is selected from the group consisting of halogen, CN, C1 to C3 alkyl,

substituted  $C_1$  to  $C_3$  alkyl,  $C_1$  to  $C_3$  alkoxy, substituted  $C_1$  to  $C_3$  alkoxy,  $C_1$  to  $C_3$  thioalkoxy, substituted  $C_1$  to  $C_3$  thioalkoxy,  $C_1$  to  $C_3$  aminoalkyl, substituted  $C_1$  to  $C_3$  aminoalkyl,  $NO_2$ ,  $C_1$  to  $C_3$  perfluoroalkyl, S or S or S membered heterocyclic ring having in its backbone S to S heteroatoms, S or S or S or S and S or S

 $R^B \ is \ H, \ C_1 \ to \ C_3 \ alkyl, \ substituted \ C_1 \ to \ C_3 \ alkyl, \ aryl, \ substituted \ aryl,$   $C_1 \ to \ C_3 \ alkoxy, \ substituted \ C_1 \ to \ C_3 \ aminoalkyl, \ or \ substituted \ C_1 \ to \ C_3 \ aminoalkyl;$ 

 $R^{C} \ is \ H, \ C_{1} \ to \ C_{3} \ alkyl;$   $Y \ and \ Z \ are \ independent \ substitutents \ selected \ from \ the \ group \\ consisting \ of \ H, \ halogen, \ CN, \ NO_{2}, \ C_{1} \ to \ C_{3} \ alkoxy, \ C_{1} \ to \ C_{3} \ alkyl, \ and \ C_{1} \ to \ C_{3} \\ thioalkoxy; \ and$ 

b) a five or six membered ring having in its backbone 1, 2, or 3 heteroatoms selected from the group consisting of O, S, SO, SO<sub>2</sub> and  $NR^7$  and having one or two independent substituents selected from the group consisting of H, halogen, CN,  $NO_2$ ,  $C_1$  to  $C_3$  alkyl,  $C_1$  to  $C_$ 

 $R^D$  is H,  $C_1$  to  $C_3$  alkyl, substituted  $C_1$  to  $C_3$  alkyl, aryl, substituted aryl,  $C_1$  to  $C_3$  alkoxy, substituted  $C_1$  to  $C_3$  alkoxy, substituted  $C_1$  to  $C_3$  aminoalkyl; or substituted  $C_1$  to  $C_3$  aminoalkyl;

 $R^E$  is H,  $C_1$  to  $C_3$  alkyl, or substituted  $C_1$  to  $C_3$  alkyl;  $R^7$  is H or  $C_1$  to  $C_3$  alkyl;

Q is S or NR8:

 $R^8$  is selected from the group consisting of CN,  $C_1$  to  $C_6$  alkyl, substituted  $C_1$  to  $C_6$  alkyl,  $C_3$  to  $C_8$  cycloalkyl, substituted  $C_3$  to  $C_8$  cycloalkyl, aryl, substituted aryl, heterocyclic, substituted heterocyclic, and  $SO_2CF_3$ ; or a pharmaceutically acceptable salt thereof